Work Order ID 51586

August 27, 2009 8:24:36 AM

Item ID: D3413-1
Revision ID: A
Item Name: Ring

Accept **Setup Start** **Stop**

Start Date: 8/27/09 **Start Qty:** 15.00
Required Date: 8/27/09 **Req'd Qty:** 15.00
Reference:

Cust Item ID:
Customer:

Approvals: **Process Plan:** MF **Date:** 09-09-24 **Tooling:** **Date:**
QC: **Date:** **SPC (Y/N):** **Date:**

Run Start **Stop**

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	**Revision Nbr**								
D3413	Rev A								
100		0.00							
Waterjet	FLOW WATER JET								
	Memo	0.00							
FLOW CNC Waterjet	1-Cut as per Dwg D3413 ☐Dwg Rev: A ☐Prog Rev: A ☐2-Deburr if necessary								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
QC									
	Memo	0.00							
Quality Control									
120	QC8- Inspect parts - second check	0.00							
QC									
	Memo	0.00							
Quality Control									

HB 9-9-24
HB 9-10-1

HB 9-9-24
HB 9-10-1

2) Solola

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3413-1 → D206-642 PAR #: ______ Fault Category: Prod-eng. coordinators NCR: (Yes) No DQA: [signature] Date: 05-10-14

Resolution: scrap. Disposition: Scrap QA: N/C Closed: [signature] Date: 05-10-14

NCR: 51586		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B Initial Chief Eng	Action Description Chief Eng	Sign & Date	Verification Section C	Approval Chief Eng	Approval QC Inspector
9/9/30	100	Found at inspection that All 21 parts have the ∅.266" hole too large. - Qty x20 parts are at	[signature]	- Fix program to cut ∅.266" hole smaller ∅.250"	[signature] 09/09/30	[signature] 09/10/02	[signature]	[signature] 09/09/30
				- Scrap and Destroy Qty x21				
		0.274" - Qty x1 part is at 0.288" ~~R.C.~~ offset do not match to get ∅2.00" hole w.J. offset	[signature]	Rings Due ~~too~~ to hole size too Large. - Replace Qty x 20 M# 105358	[initials] 9-9-30	[signature] 09/10/02	[signature]	[signature] 09/09/30
		will always make ∅.286" hole too Large. RC: program [signature]	[signature]	- update I.P.P to drill hole to finish size per dwg.	[signature] 09/10/07	[signature] 09/10/07	[signature]	[signature] 09/09/30

NOTE: Date & initial all entries

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

Work Order ID 51586

August 27, 2009 8:24:37 AM

Item ID: D3413-1 **Accept** **Setup** **Start**

Revision ID: A

Item Name: Ring **Stop**

Start Date: 8/27/09 **Start Qty:** 15.00 **Cust Item ID:**

Required Date: 8/27/09 **Req'd Qty:** 15.00 **Customer:**

Reference:

Run **Start**

Approvals: **Process Plan:** **Date:** **Tooling:** **Date:**

QC: **Date:** **SPC (Y/N):** **Date:** **Stop**

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 Small Fab Small Fab	Small Fab	0.00							
	Memo 1- Deburr and drill hole if required as per dwg D3413 & QSI018 4.1 .	0.00	M-h		09/09/30			21X	
			M-h		09/10/02			20X	
140 QC Quality Control	QC5- Inspect part completeness to step on W/O	0.00							
	Memo	0.00	2) Sanluk			+20	20		
150 Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum M 112860	0.00							
	Memo START TIME: 10:40 OVEN TEMPERATURE: 300° FINISH TIME: 11:10	0.00	BL 09-10-6			20			

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W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Work Order ID 51586

August 27, 2009 8:24:37 AM

Item ID: D3413-1
Revision ID: A
Item Name: Ring

Accept **Setup Start** **Stop**

Start Date: 8/27/09 **Start Qty:** 15.00
Required Date: 8/27/09 **Req'd Qty:** 15.00
Reference:

Cust Item ID:
Customer:

Run Start **Stop**

Approvals: **Process Plan:** **Date:** **Tooling:** **Date:**
QC: **Date:** **SPC (Y/N):** **Date:**

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 QC Quality Control	QC3- Inspect Part Finish	0.00	=> HJ	09/10/07		X20	0		
	Memo	0.00							
170 Packaging Packaging	Identify as per dwg & Stock Location: ~~4473~~	0.00	mo	09/10/07		X20			
	Memo	0.00							
180 QC Quality Control	QC21- Final Inspection - Work Order Release	0.00							
	Memo	0.00							

09/10/08 HJ

MF 09-10-08

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W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Picklist Print

August 27, 2009 8:24:36 AM

Work Order ID: 51586

Parent Item: D3413-1RevA

Parent Item Name: Ring

Comments:

Start Date: 8/27/09 **Required Date:** 8/27/09

Start Qty: 15.00 **Required Qty:** 15.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
M304B0.250X4.000		Purchased	No			100	f	20.1900	3.9474	5.5263	8-9-09 8-10-1	

304 BAR .250 x 4.00

Warehouse Location	Loc Qty	Loc Code
Main Warehouse		
MAT	20.19	
105358	18.39	105358
105643	1.8	

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W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	51586
Description: RING	Part Number:	D3413-1
Inspection Dwg: D3413-1 Rev: A		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

[X] First Article [ ] Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø .266	+.006 -.001	.270	✱			
Ø 2.00	+.017 -.001	2.001	✱			
Ø 3.00	+.017 -.001	3.006	✱			
.75	+/- .030	.748	✱			
3.88	+/- .30	3.882	✱			
.250	+/- .010	.246	✱			

Measured by:	IB
Date:	9-10-1

Audited by:	S
Date:	09/10/02

Prototype Approval:	N/A
Date:	N/A

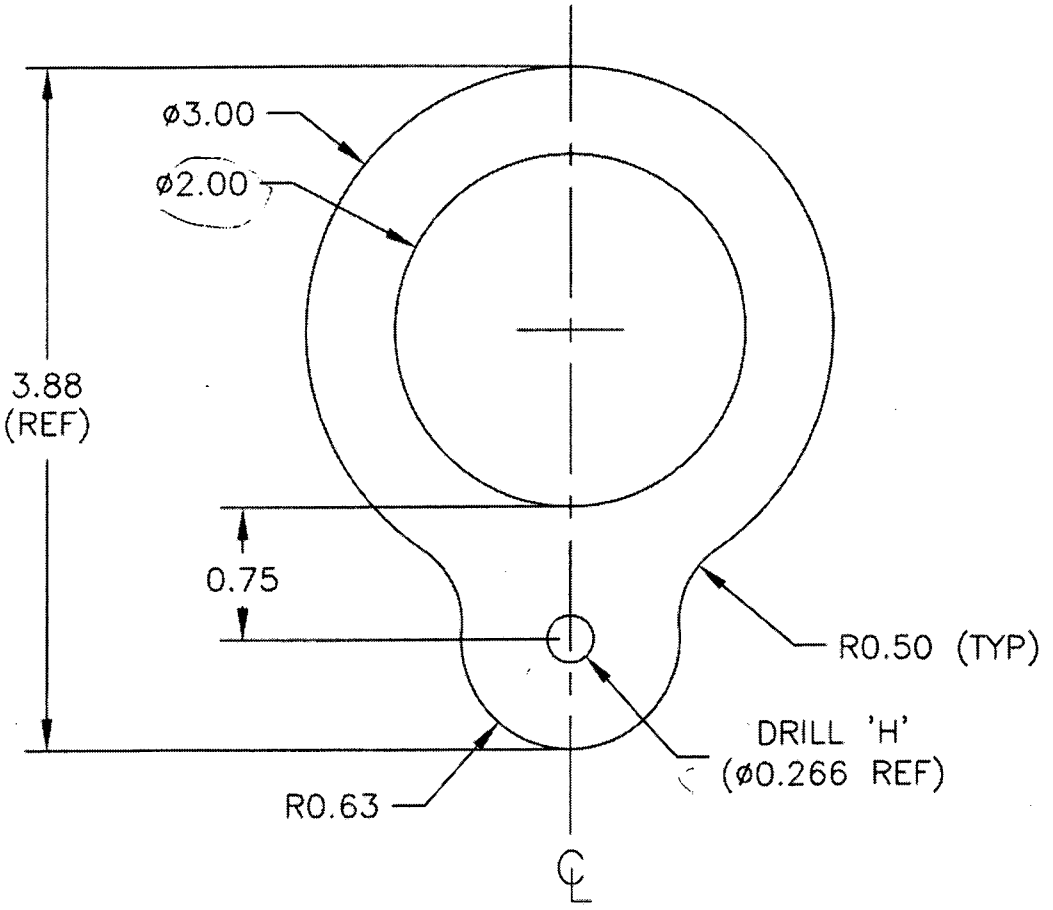
Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	

DART

DESIGN	DRAWN BY	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CP	CP		
CHECKED	APPROVED	DRAWING NO. D3413	REV. A SHEET 1 OF 1
DATE 05.03.16		TITLE RING	SCALE 1:1
A	05.03.16	NEW ISSUE	

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 3586

RELEASED
05-09-06



D3413-1 RING

1) MATERIAL: AISI 304/316 SS PLATE, 0.250 THICK (REF DART SPEC. M304S3GA)
2) FINISH: POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
3) DEBURR ALL SHARP EDGES 0.010 TO 0.020
4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
5) ALL DIMENSIONS ARE IN INCHES